What's the best place for me? : locationchoice for S&E students in India

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Location-choice for S&E students in India

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WHAT'S THE BEST PLACE FOR ME? LOCATION-CHOICE FOR S&E STUDENTS IN INDIA

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ABSTRACT

This paper examines how national migration policies and country-specific factors in receiving countries attend to a potential highly-skilled migrant when one is deciding among several possible locations. While continental European countries recognize the need to attract migrants as a key component of their economic strategies, it remained unclear to what extent the more open immigration policies led to actually increase the attractiveness of European countries to perform better at the global competition for the highly-skilled. The survey among prospective migrants in India shows that while European countries appear to be relatively attractive for study purposes, they are not perceived equally attractive as a place for a long-term stay. To overcome the risks and pick Europe as a destination, more resources and skills are necessary than for traditional immigration countries; be it in terms of existing networks abroad, higher educational level or better language skills. With less long-term migration initiatives to Europe, immigration policies and destination country-specific factors, chances to obtain citizenship and amenities of local environment become less relevant. European governments place considerable effort on integration of student migration as a part of a wider immigration strategy. This strategy is likely to prove ineffective if "probationary migrants" clearly do not see European countries as prospective work destination for the period after their graduation.

Key words: location choices; pull factors; higher education; student migration; migration policy; India

JEL codes: F22 - International Migration; J61 - Geographic Labor Mobility; Immigrant Workers; K37 - Immigrant law; I23 - Higher education, research institutions; J24 - Human Capital, skills, occupational choice, labor productivity

1. INTRODUCTION

There is a growing agreement that international student mobility is a particularly attractive channel of highly skilled immigration, considering that a host country receives human capital which is well adapted to its labour market. Various studies show that students who studied abroad are more likely to work abroad after the completion of their studies in comparison to other domiciled students (De Grip, Fourage, & Sauermann, 2009; Findlay, Stam, King, & Ruiz-Gelices, 2005; King, Ruiz-Gelices, & Findlay, 2004; Tremblay, 2002; Wiers-Jenssen, 2008). Student migration is construed as a form of knowledge migration also by industrialized countries which are changing their policies in order to become more attractive for students and highly skilled migrants. European migration policies have become progressively more favourable towards the admission of highly-skilled workers in recent years and have in certain aspects become more attractive than the H-1B visa in the United States. Specifically advantageous rules were adopted for young migrants and for former students, which are lured to host countries as "probationary migrants" (Wiesbrock & Hercog, 2010). However, European countries have had different levels of success in reaching the expected higher figures of skilled immigrants.

With the objective of finding out whether continental European countries have successfully joined the global competition for talent, this paper compares the perceptions potential migrants have about these countries as opposed to the views they have about traditional immigration countries. It contributes to the existing literature

by observing whether determinants of migration to continental Europe differ from determinants of migration to the United States and the other Anglo-Saxon countries.

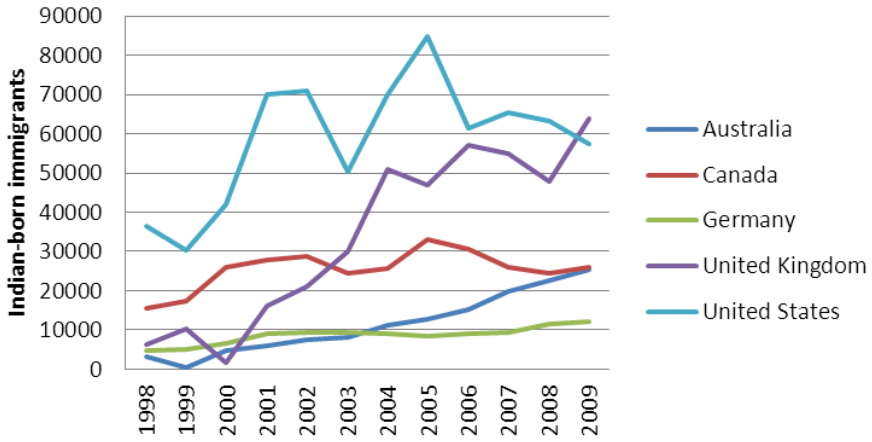
The study is focused on students in the field of science and engineering from five Indian universities. The paper uses the collected data from the survey held among students at five Indian universities to describe and analyse the decision-making about moving abroad in the future. In total, 412 students in science and engineering fields participated in our survey, answering sets of questions on their personal situation, their preferences to move abroad and their social networks. Of those 412 students, 262 indicated to have an interest to move abroad, and 150 indicated no desire to leave India. The survey data were complemented with qualitative data, obtained during interviews in India.

Firstly, the geography of Indian migration, globally and with a focus on Europe and North America specifically is shortly described. Secondly, we present previous research about student choices on international mobility. Thirdly, we analyse the data from the survey at five Indian universities and observe if students differ when compared by preferred destination country in any of the personal and background factors as well as in consideration of influencing factors on migration decision. This analysis is quantitative, comparing descriptive statistics as well as performing multinomial logit regressions. In addition, we reflect on the results of the quantitative analysis by the investigation of in-depth interviews with a selected group of students. The paper concludes with propositions for possible policy interventions that would function as incentives to migrate to a certain country.

2. GEOGRAPHY OF OVERSEAS INDIANS

Figure 1 shows an increase in immigration flows from India to major OECD receiving countries. While the United States and the United Kingdom continue receiving the largest numbers of Indian migrants, a substantial increase is also noticeable for Australia and to a lesser extent for Canada, which had a peak in immigration in 2005 but has now again reached a similar level as previously.

Figure 1: Immigration flows of Indian-born immigrants (aged 15 and older) in the main OECD destination countries, from 1998 to 2009

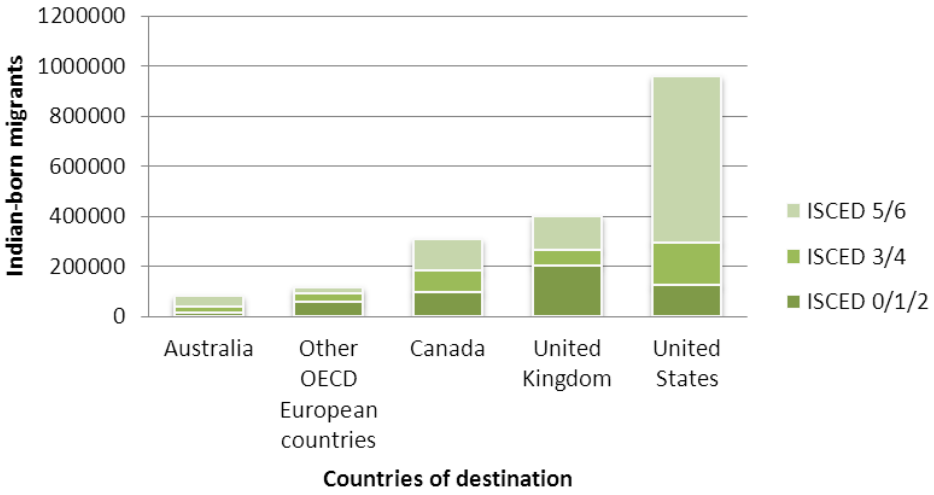


Source: Database on Immigrants in OECD Countries (DIOC), OECD.stat, extracted on January 7, 2012

Highly-skilled Indians concentrate in a few industrialized destination countries. 92.3 percent of all Indian migrants with tertiary education reside in only three countries: the United States, the United Kingdom and Canada (see Table 1 in the Appendix). The United States by itself hosts 66.4 percent of all tertiary educated

Indian migrants. Especially notable for Indians in the United States is their skills composition. 69.1 per cent of Indian-born immigrants in the United States have completed tertiary education. Indians are also the most prevalent among the H-1B visa beneficiaries, representing 48 per cent of reported beneficiaries for this visa, specifically designed for specialty occupations (USCIS, 2010). Skills composition in Australia and Canada is also leaning towards highly-educated migrants, with 53.3 per cent and 40.7 per cent of Indian migrants holding tertiary education, respectively. In comparison, the overall skills structure of Indian migrants in Europe is dominated by migrants with lower levels of education. In the United Kingdom and continental European OECD member states, half of Indian-born migrants hold only primary education or lower. Only 21.5 per cent of Indian migrants in the European OECD countries, without counting the United Kingdom, hold tertiary education.

Figure 2: Indian-born immigrants in major destination countries by educational levels



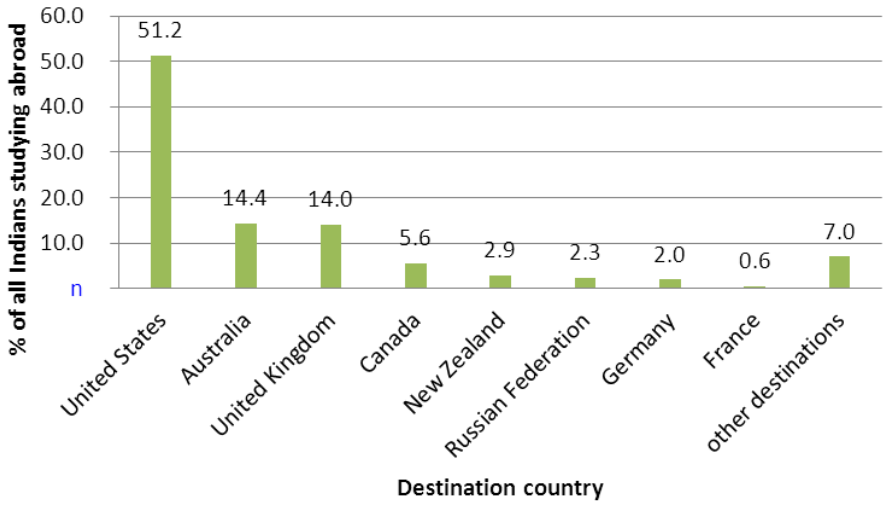
Source: Database on Immigrants in OECD Countries (DIOC), OECD.stat, extracted on September 26, 2010

Looking at the Indian population in Europe in closer detail, it is clear from the above presented numbers that the United Kingdom accounts for two thirds of the Indian-born migrants in Europe. The Annual Population Survey in the United Kingdom assessed the stock of Indian-born migrants for 2011 to be 729,000, an increase from 502,000 in 2004 (ONS, 2011). The inflow of Indians in the United Kingdom has been substantial ever since the independence of India, and has recently further increased. Table 2 shows immigration inflows to the United Kingdom for 2001 with 15,957 people with a previous residence in India immigrating annually; with a continuous increase for each subsequent year, this number had increased to 51,849 by 2006. An increase in immigration flows from 1998 till 2009 is noticeable for all observed countries, especially for Spain, Sweden, Italy, Denmark and the Netherlands. Immigration of Indians to Spain increased twenty fold within this timeframe, predominantly with low-skilled migrants. Although the overall numbers of Indian migrants in Europe are still low and represent almost negligible shares on the global scale, there is a clear trend of growth.

The United States of America is also the main destination for Indian students, attracting 51.2% of all Indians who studied abroad in 2008 (94,664 in absolute numbers) (see Table 3). The other main countries of destination are Australia (26,520), United Kingdom (25,901), Canada (10,357), New Zealand (5,426), Russian Federation (4,314) and Germany (3,644), while the remaining destination countries only draw minor shares. Whereas the top three destinations, the United States, the United Kingdom and Australia attract 79.6 percent of Indian students enrolled abroad, we can observe that increasing numbers of Indian third level students have been moving to other destinations such as Canada and New Zealand, but also to continental European

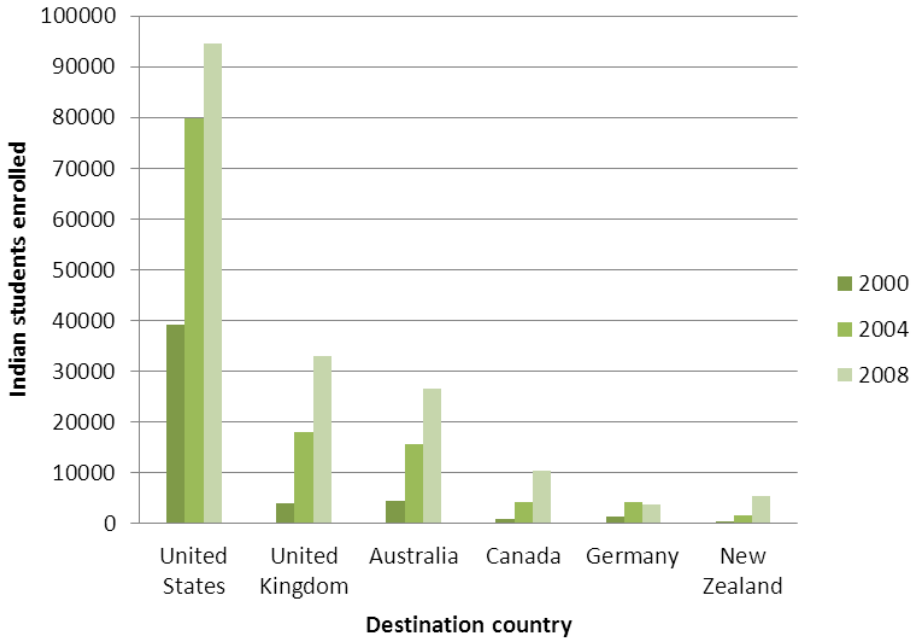
countries like Germany and France (OECD, 2010b). Figure 4 illustrates this growth from 2000 till 2008 for the main countries of destination. All of them experience upsurges in enrolments of Indian students. Germany is the only country experiencing a slight drop in Indian enrolments after 2004.

Figure 3: Indian students studying abroad in tertiary education



Notes: Indian students studying abroad in tertiary education in a given country of residence as a percentage of all Indian citizens studying abroad (2008) in all reporting countries, Source: (OECD, 2010a), Author's analysis

Figure 4: Indian students enrolled abroad in a given country of destination, years 2000, 2004 and 2008



Source: The UNESCO/OECD/EUROSTAT (UOE) database, http://stats.oecd.org, accessed 25 April 2011, Author's Analysis

3. RELATED PREVIOUS RESEARCH

Increased student mobility has not gone unnoticed with the academic research. The majority of studies has put more emphasis on the demand side, observing educational institutions and from a marketing perspective suggesting improvements to the universities in the offer to international students (Binsardi & Ekwulugo, 2003; Mazzarol, 1998). Already the early work on student mobility sees the university offerings not only in terms of core educational service, but also in combination with secondary/auxiliary offerings of tangible and intangible attributes (Grönroos, 1978, 1994; Levitt, 1980). However, these studies have not touched upon the influence of non-educational factors such as personal reasons or the country image effect. Cubilo, Sanchez and Cervino (2006) make an overview of the main higher education choice literature and it is noticeable that for a majority of previous studies non-educational factors are not taken into account. Findings of the papers mentioned in this overview expose the importance of university and programme reputation (Lin, 1997; Mazzarol, 1998; Peng, Lawley, & Perry, 2000; Price, Matzdorf, Smith, & Agahi, 2003; Qureshi, 1995; Soutar & Turner, 2002) the need of segmentation of prospective students and programme suitability (Hooley & Lynch, 1981), wide offer of courses, cost of attendance, financial aid (Ivy, 2001; Qureshi, 1995), teaching quality (Lin, 1997; Price et al., 2003; Soutar & Turner, 2002) and internship opportunities (Lin, 1997).

Only a few papers look beyond the effects of education services on student mobility choice. Srikatanyoo and Gnoth (2002) are among the few authors which focus on the country image effect on the decision making in international tertiary education. They develop a conceptual model for students' choice of international tertiary education destination, in which country image is placed on a par with institution image and programme evaluation. They claim the country image directly influences students' attitudes towards its academic institutions in either a positive or a negative way. A favourable country image may create positive beliefs about the quality of institutions as well as shatter the success of individual educational institutions. Bourke(2000) sustains this claim in her empirical investigation on international students in Ireland and pre-departure students in Malaysia. Educational reputation of a country proved to be a decisive factor in the choice of a destination. Their fieldwork testifies that intending students first select a host country and then choose an educational institution. Binsardi and Ekwulugo (2003) also identify in their study among international students in the UK that it is both, educational and country-related factors which influence their decision for location. Respondents in the survey ranked the ease of immigration procedures and university admissions right after the importance of educational standards. The ease of finding employment during and after the studies was positioned in the third place and the cost of living, safety and culture in the fourth place. Nonetheless, contrary to above mentioned studies Peng et al. (2000) conclude that brand image still has the strongest effect when they model effects of country, corporate and brand images on evaluation of educational services.

Although decisions concerning student mobility are not necessarily equivalent to those of labour migration, we can make a number of parallels also from the research on determinants of destination choice for highly-skilled migrants. Determinants of migration has traditionally been researched from the perspective of neoclassical economic migration theories (Harris & Todaro, 1970; Sjaastad, 1962; Todaro, 1969), which analyse migration decision in terms of evaluating costs and benefits of migration. An individual is seen as a utility maximizing agent who will migrate when one expects a higher utility in a different location, net of migration cost. Individuals compare locally expected earnings with their expected earnings at different destination countries. Economic literature emphasizes the economic aspects of the decision-making and posits that people migrate to areas with a higher wage level. Especially when international students are seen as 'probationary immigrants' (Millar & Salt, 2007) who take student mobility as a stepping stone towards later labour migration, an assumption can be made that career prospects in the host country play a role already at the decision about student mobility.

Among the few papers attempting to explain the country choice determinants by demonstrating the difference in migration decision with respect to geographic areas, papers by De Grip, Fouarge, and Sauermann (2009) and Constant and D'Agosto (2008) look into the determinants of country choice for European science and engineering graduates and for Italian scientists and researchers, respectively. De Grip et al. find out that among European science and engineering graduates, wages matter only for migration within the European Union but not for migration to Anglo-Saxon countries, which attract people for higher R&D intensity rather than prospects for higher wages. Differences between graduates' destinations are found also in terms of disciplines, namely graduates with a life science degree preferring Anglo-Saxon countries. Previous migration experiences of graduates and of their parents are predictors for migration to other European countries, but not for migration to the Anglo-Saxon countries. Similarly, people in relationships and older graduates are more likely to migrate to another European country (De Grip et al., 2009). The study findings by Constant and D'Agosto show that gender, education and working experiences from abroad, the field of specialization, motives for migration, and duration of residence abroad can predict the country choice. For example, men are less likely to go to the UK than women. People with a PhD from outside Italy are more likely to go to the UK than other EU countries and those with some working experience from outside Italy are less likely to go to the US. In addition to the above, the lack of research funds in Italy determines the choice of going to the US (Constant & D'Agosto, 2008).

Mahmood and Schömann (2003) contribute to the debate on location-choice preferences by acknowledging that staying in a home country is increasingly a viable option also for many highly-skilled people from developing countries. They look at the determining factors influencing selection of alternative countries for IT-graduates in Pakistan (2003a) and India (2003b), respectively, and compare the factors with the option of staying in a home country. When comparing between alternative foreign destinations, it shows that the United States and Canada have an advantage over Germany when looking at the impact of self-employment, high-career positions, social networks and residence permits. Economic aspects prove to be more important for migration decisions than institutional and socio-political factors.

4. DATA

The data were collected during two field visits in India. The data collection took place in March and April 2009 among students at Jawaharlal Nehru University (JNU), Institute of Technology - Banaras Hindu University (IT-BHU), and University of Jammu. In August 2009, the data were collected at the Indian Institute of Technology (IIT) Delhi and Indian Institute of Science (IISc) Bangalore. All chosen institutions are reputed for offering high quality higher education, as either recognized by the University Grants Commission (UGC) or graded by The National Assessment and Accreditation Council (NAAC) under the 'A category' denoting "High level of academic accomplishment as expected from an institution" (NAAC, 2007).

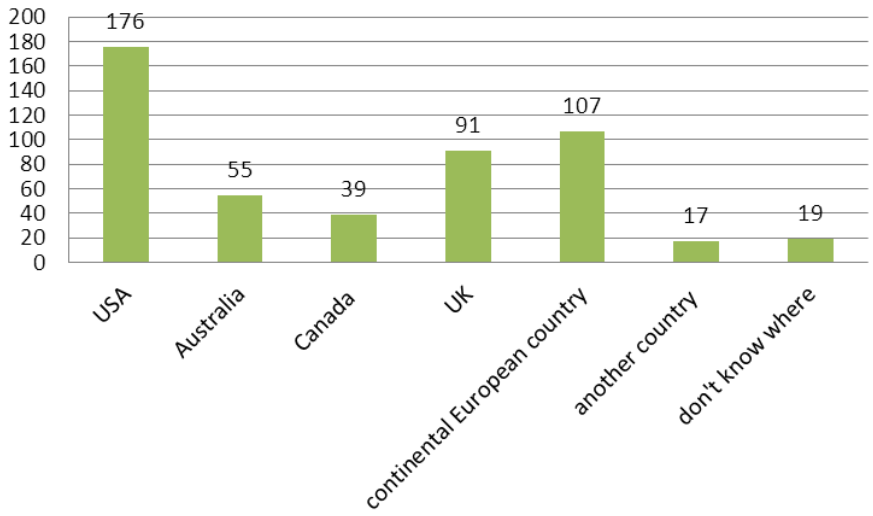
In order to be eligible for the survey, students had to fulfil the following criteria. They had to be Indian, study at the selected institutions, in particular in the field of science and engineering. Because some of the students accessed the survey through group invitations (e.g. a post on a Facebook group), there were a few students in the survey who did not correspond to described criteria. 25 students could not be included in the results since they did not study at the specified universities. For the analysis, we also excluded 30 students of social sciences, humanities and law, because students from these studies were ineligible for the purposes of this study. After excluding both groups and those questionnaires that had missing entries for several preselected crucial variables, we get a total of 412 responses, which we use for the analysis.

The survey was filled out by students at five universities. 145 students from the respondents are studying at JNU, 74 at IISc Bangalore, 45 at IT-BHU, 44 at the University of Jammu, 42 at IIT-Delhi. The other 62 students did not specify their university. In line with the gender distribution of the targeted population of science and engineering students, our respondents comprise of predominantly male student population with 71 per cent of our survey respondents being male. The average age of respondents is 24 years (Table 3 in the Appendix)

illustrates the respondents' characteristics along the dimensions of personal characteristics, university and family background, migration history and social network abroad.

In line with expectations, a large share of survey respondents stated that they consider moving abroad in the future, with 63.6 per cent of the studied students. The analysis presented in this paper looks only at those students in the collected dataset who have expressed the intention to move abroad and analyses their choice of preferred country. Several questions in the survey address the decision-making with respect to the location choice. Among those who reported a plan of going abroad, we find a dominance of preference for going to the United States, similar to the general distribution of Indian students abroad. Respondents could choose several countries which they consider as their potential destination (see Figure 5). Most respondents in our sample chose the United States as preferred destination, followed by the United Kingdom as second most often chosen preferred destination. Among people who answered they would consider going to a continental European country, the most common answer was that they would want to go to Germany, followed by France, Switzerland and The Netherlands. If they chose the option of another European country, they were asked to specify which European countries they would choose by having space to provide more options. Germany was mentioned 72 times, France 28 times, Switzerland 19 and The Netherlands 15 times.

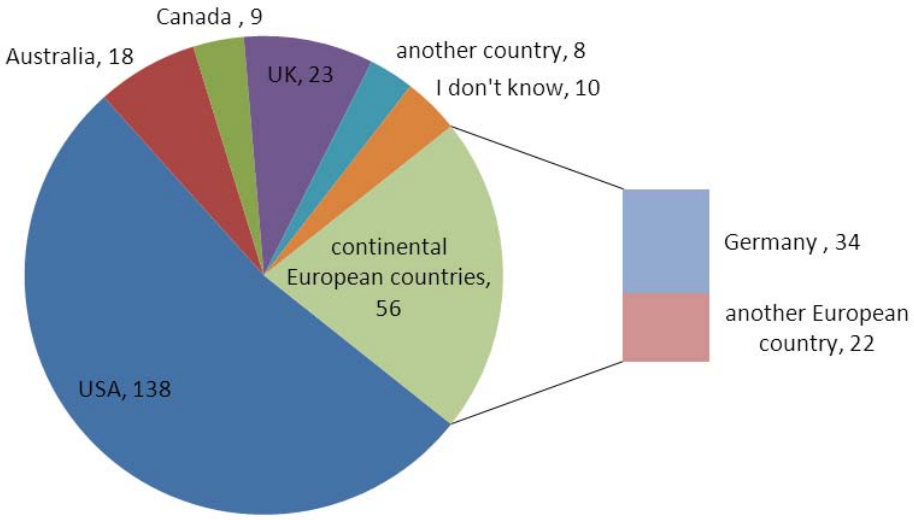
Figure 5: What destinations would you consider if you move abroad? (Multiple answers possible, N=311)



In the subsequent question, respondents were asked to name only one country as their first choice if they were to move abroad in the following five years. Behavioural intentions are considered good predictors of actions if they measure somewhat specific behaviour in a restricted time span in which an individual has a lot of freedom of choice (Van Dalen & Henkens, 2008). The question we address to the respondents is therefore purposely specific about their future plan regarding location choice within an exact time frame (five years). As shown in Figure, it is remarkable to note that more than half of our respondents (52.7 per cent) choose the United States of America as their first option for moving abroad. Interestingly, the second most often mentioned country is Germany, however only 13 per cent of students mentioned it as their first choice. The other most frequently mentioned countries are the United Kingdom, Australia and Canada. As expected from the general patterns of Indian highly-skilled migration, preferences for a destination country from our sample clearly show that some countries have an obvious advantage in attracting the Indian skilled population. From the presentation of general statistics of Indian highly-skilled mobility, it is clear that the European countries lag far behind the United States, which has had over a million of admissions of Indian citizens in each year since 2007, with only a small decrease in 2009 (USDHS, 2012). In our sample, however, continental European countries are mentioned

rather often as the first preference. Interestingly, Germany is picked more often than the United Kingdom or Australia, which in overall trends of Indian international student mobility come second and third after the United States. Other continental European countries were also picked in 22 cases as the first option out of 262 answers. There are a number of countries clustered in this group, with Switzerland, The Netherlands and France being mentioned by more respondents. This outcome offers some positive indications with respect to competitiveness of European countries in the competition for skilled migrants. In the next section we take a closer look at those respondents which pick Europe as their preferred foreign destination. We observe whether there are any apparent differences between those students who choose the United States compared to those that choose any of the other Anglo-Saxon countries or European countries.

Figure 6: What would be your top destination country in case you want to move in the following 5 years? (one answer possible, N=262)



5. COMPARISON OF RESPONDENTS BY PREFERRED DESTINATION

In order to provide an assessment whether respondent differ in personal and other background factors by a chosen destination country, we divide the respondents to our question to which country they like to move in three groups: those that prefer the United States, those that prefer other Anglo-Saxon countries and those that prefer continental European countries. Migration choices are pulled together in three mentioned groups according to relevant criteria determining migration patterns. The United States' universities and high technology companies have worked as a magnet for Indians for decades, leading to a strong migration network. As a traditional immigration country, a vast majority of skilled Indians are exclusively interested in migrating to the United States of America. In the second group are the other Anglo-Saxon countries, namely the United Kingdom, Canada, Australia and New Zealand. They have been historically open to immigrants; they are all English-speaking countries, and linked to India with colonial history. The four named Anglo-Saxon countries all have a supply-driven immigration policy for the highly skilled, where applicants for skilled migration are selected based on their attributes and capabilities. Australia and Canada were the first to introduce points-based system as part of their immigration policy already in the 1980s, New Zealand followed in 1991 and the UK introduced of a similar system in 2002. As the third group, of particular interest for this

research, the European continental countries are pulled together in one group. These countries differ from all the Anglo-Saxon countries in several aspects. First of all, the fact that English is not the main language spoken in these countries leads to a language barrier, which might make these countries less attractive for English-speaking students. Second, these countries miss historical traditional links with India and due to smaller inflow of migrants in the past they also lack migrant networks which could facilitate migration and inspire potential migrants to consider a specific foreign country. However, with changes in immigration and higher education policies in order to attract highly skilled migrants from third-countries and with a growing agreement that high-skilled immigration is desirable for Europe (Kahanec & Zimmermann, 2011), we have a special interest to observe how Europe is perceived by potential migrants and whether personal and structural background factors differ between respondents who chose a certain destination preference.

From this analysis we omit those respondents who did not specify a preferred destination country or chose a country which does not fit in the three geographical categories. The selection under the category of "other countries" ranges from mentioning specific countries in Asia to a description of the favourite place in terms of offering specific qualities, for example good and competitive research. As very few answers fall in this category and since there is no commonality within the category, we decided to omit the responses from this part of the analysis of location choice.

We are interested to observe how the various factors of interest of the respondents differ by countries chosen as the first option for migration (see Table 4 in the Appendix). We use the Pearson's Chi-square test to test whether people with different personal and structural background characteristics also differ in frequency with which they express preferences for migration destinations.[1] We further look into issue if any of the dimensions would have an effect in terms of choosing a particular group of countries. To find the level of statistical significance linked with a single cell value, we conduct a residual analysis.

A general observation can be made that students' personal profiles do not differ much between those that choose one destination or another. Only in terms of having children, level of studies and having networks abroad, we observe differences in country choice that are statistically significant. As it turns out, the number of cases of students with children wanting to go to any of the other Anglo-Saxon countries is significantly smaller than would be expected. At the same time, students who have children are significantly more likely to choose any of the European destinations. When looking at division by students' community belonging, we observe that among those that would choose the United States, there are relatively more Hindus than in the other two destination groups. Refraining from drawing general explanations for migration aspirations for such a heterogeneous group, we can still attempt to explain the different geographical focus by the probable mechanism of path dependency of earlier migration. In the past decades, the United States has been the main destination for highly-skilled Indians and has now an established Indian community which consists primarily of Hindus. While Hindus are the dominant emigrant group within each destination region, the United States stands out with the highest relative percentage of Hindu migrants compared to other regions of immigration, with the Middle East having the lowest relative percentage; 82.7 percent and 49.7 percent, respectively. For comparison, Hindus represent 79.7 percent of Indian migrants in the United Kingdom and 67.8 in Europe other than the United Kingdom (Kapur, 2010). As the network effect pulls future flows towards the existing migrant population of their own community, this could explain relative preference of Hindus to follow in the footsteps of other Hindus. In this manner, earlier migration determines the difference in preferences between communities for the future generations. As for the non-Hindu population, we observe the lowest relative

[1] The test of independence measures whether paired observations on two variables are independent of each other. Since our sample is small, we also use the Fisher's exact test for some of the variables. We further assess with a two-tailed test whether any of the categories of the selected values have an effect in terms of destination choice.

percentages of Muslim as well as Christian emigrants in the United States (10 per cent and 3.8 per cent of all Indian immigrants in the country, respectively) as compared to the other countries and regions. Since the networks of previous migrants from their own community are scarce, they are missing the positive effects which could be available in a form of providing relevant information and facilitating access to universities and future employment. Nevertheless, it is important to mention that in our sample despite the relatively smaller share of non-Hindu respondents among those that prefer the United States, many of them still put it as the first choice for migration (41.3 per cent).

In terms of the university background, we observe that students in different levels of their study programmes differ in terms of a chosen destination country with a statistical significance of 5 per cent. Among those students who pick European countries, there is a higher than average representation of students in their Bachelor programmes. The Anglo-Saxon countries seem to attract more Masters students, who are highly represented within this group; nevertheless, respondents pursuing PhD studies or post-doctoral studies have a low representation among those who picked any of four Anglo-Saxon countries. Looking closer into the differences in terms of country choice, we observe that continental European countries have higher attraction for people in natural sciences (as opposed to engineering fields). Among those students who pick European countries 49 perc ent are pursuing studies in natural sciences, while among those who want to go to the United States the share of natural science students is only 36.7 per cent. In terms of students' performance, we observe only minor differences between the chosen countries. Proficiency in English displays unexpected outcomes. Among the ones that want to move to Europe, only 9 per cent of students report their knowledge of English as medium or worse level[2]. The share of students with worse command of English rises for students with the English-speaking countries as a preferred country to just over 20 per cent. It is difficult to explain with the results of this study why there is a higher proportion of respondents with good knowledge of English for the continental European countries.

In terms of students' family background, none of the observed dimensions prove to display statistically significant differences with respect to choosing a certain country. We observe that among students who have a preference for continental European countries a significantly higher percentage has lived abroad in the past as compared to students preferring other destinations. 23 per cent of those that would choose Europe as a destination region have already had some experiences with living abroad while only 13 per cent of those that would go to English-speaking countries have had such experience. In a similar way, it is those respondents who have a preference for Europe that are more likely to have friends and colleagues living abroad. Judging from this result, we can conjecture that social ties are more important for planning to go to new destination countries as opposed to going to dominant destinations where the majority of migrants had gone. As Epstein (2008) explains, most new migrants will follow previous migrants assuming that they had access to convincing information to select that particular place. As a potential migrant with limited information about differences between different host countries, it is a conscious safer decision to follow previous migrants on the assumption that if so many people favoured that location they could not be wrong. Through such informational cascade or herd behaviour, migrants group in the dominant destinations, causing that migration to other destinations stays limited (De Haas, 2010). To put it differently, those respondents who want to go to the traditional migration countries do not need a personal contact that would facilitate and aspire their migration: instead, they follow a general trend of earlier migrants. On the contrary, a plan to go to new destination countries is more dependent on the information received from people who are either based there at the moment or have earlier lived there. Even though network externalities are small considering the small population of earlier immigrants in the foreign location, migrants still decide to follow previous migrants basing their decision on experiences of others. In addition, in the more pioneering stages of migration to a particular destination, the

[2] The difference with the averages from the other chosen destinations is significant at 10% level.

feeling of solidarity and responsibility towards people coming from the same place is stronger, meaning that new migrants can count on more attention from the network.

In this section we demonstrated that students choosing certain locations differ in their personal and educational background. Respondents preferring European destinations are more likely to be male, from a reserved background, more of them have children. More of them also study natural sciences, are currently enrolled in Bachelor programmes, have a better command of English, are from urban area and have friends or colleagues who have lived abroad. These results point to a thought-provoking finding that more resources and skills are necessary for choosing a non-traditional destination country; be in either in terms of existing networks, higher education level or better language skills. Path dependency of earlier migration trajectories explains that most new migrants follow previous migrants to the same destination countries and only those who feel able to overcome the barriers and constraints associated with migration would choose not the most straight-forward location choice.

6. EVALUATION OF THE FACTORS

The students were asked to rank on a five-point scale the importance for a number of stated factors for the country where they want to live. Again we divide the responses by their preference for the destination country/region in three columns, plus an additional column for mean values of all respondents. Table 5 (in the Appendix) provides the mean values of all factors for each of the three studied destination regions. The numbers given as the upper case designate the ranking of the five most important factors within a certain destination region.

On the whole, it can be observed that students who want to go to the United States value the majority of factors higher compared to students from the other two observed destinations. In addition, respondents put high ranks across the factors, with none of the factors ranked on average below the neutral value of three. The most important factors for all students are related to career path. The students who have picked the United States as their preferred country choice place on average the highest value on quality and content of their work, good research facilities and recognition for qualifications. Also for the students preferring other Anglo-Saxon countries, quality of work is regarded as most important. For continental European countries, in contrast, this factor came only as the eleventh most important in mean values. The most important for respondents with preferences for continental European countries is good quality of higher education institutions, followed by quality of research facilities, which clearly shows their focus on moving abroad for the purpose of studying. A student from JNU who picked Sweden for his post-doctoral programme explains in the interview:

> "Basically I chose to go to Stockholm University because they are famous for the Nobel laureate and the research council. And there is already collaboration between my professor and Stockholm University. So first I go and see which group is going to publicize more papers in the future and which group has been handed the best project in this work."

His reasoning of placing the highest value on the quality of research facilities is typical for several other interviewees following an academic career. However, non-educational factors figure rather prominently in the location deliberations. A PhD in Environmental Engineering from JNU explains her thinking about the role of country image in her moving plans:

> "Maybe we have a lot of work going on in Taiwan or in China but maybe because of the kind of lifestyle we would have over there, we would prefer to go somewhere better. Or maybe we will not go to very small places. We are not very sure of what kind of life it would be. Or maybe if we would be

offered to go to Kenya or something like that, we would think twice. So I do think it will matter in the long run."

Interestingly, student preferring Anglo-Saxon countries place high importance on safety factors. They placed public safety as well as political stability among the first five most important factors. This aspect is worth further exploration as, during the in-depth interviews, concerns over safety were expressed especially with respect to the attacks on Indian students in Australia and experiences with discrimination in the United Kingdom. This could explain why for those students who plan to move to Anglo-Saxon countries are more concerned about the safety and hence rank them as relatively more important.

Given that students who prefer the United States in general rank factors with greater importance, it is difficult to compare the mean values across countries/regions. The biggest differences in mean values between the group preferring the United States and the group preferring the European countries appears at the factor of quality and content of work, the need to learn a new language and in the value given to possibility of not working more than 8-hour per day. In the interview, Parveen, a PhD student in environmental engineering, JNU, explains that he heard from other people who were in Europe that they experienced less work pressure, which helps him pick a location suitable for his wishes:

> "In my experience I don't want to work so much. So I would like to do the routine works like the 9 to 5 hours in a week. Next to my research I also want to give time to my personal things. That is why I choose Europe rather than going to the USA. And even I would like to go more to the Scandinavian countries than to go to Germany or France. Because in Germany the work pressure is very high."

We can observe that students who prefer European countries place higher mean value in comparison with those preferring the United States only in three cases. These are the following: rich cultural institutions, social security and benefits and friendly hospitable population. However, none of these criteria is regarded very important in comparison to other factors. Considering that students preferring Europe ranked these factors relatively low in terms of importance, means they do not have much value in terms of attractiveness.

In sum, it can be said that perceptions about the situation in potential countries favours the United States (mentioned in one interview as "top country"), which indicates an image problem faced by the other potential destination. The governments are putting considerable efforts to expand a market for higher education in Asia with international recruitment industry and integration of student migration as a part of the wider immigration strategy. Most important factors for the decision to move to a foreign place appear to mainly relate to career path, either for education or work purposes. On average, factors related to social contacts and public policy rank lower in terms of importance, which is consistent with the study conducted on IT-graduates in India by Mahmood and Schömann (2003). In their study, salary was shown to rank as the most important determinant with the highest mean values for all foreign countries except for the ones which want to stay in India. Likewise, mean values were the highest for all observed determinants by students preferring the United States.

While the previous question was asked to all respondents referring to the place where they want to live, the subsequent questions address only the evaluation of factors if they had plans to move abroad. Firstly, we asked how important it is for them to live near a large Indian community in a prospective host country. Although increasing, there are still relatively small numbers of migrants from India in continental European countries, so it is according to expectations that migrant networks are not that much relevant to those who prefer moving to Europe over other destinations. Aseem, a Bachelor student in chemical engineering at BHU-IT, talked about the difficulties he would expect from living in a place with a small Indian community:

> "…if we go to some place where there aren't very many Indians there…Like in a place in Europe, I don't think there are many Indians compared to America. (…) So, if you don't find the people to whom you relate, how can you relate to yourself? So, there will be problem for you and you can adjust in the US

much easier. (…) I prefer where there are peoples whom I can relate to, I can enjoy, and we can have gatherings and we can have common thing that we can share with each other. Because I can adjust; anyone can adjust to other place where you can relate to yourself."

In the reminder of the question, students were asked to rank the importance of policy-related factors. In comparison to other factors, migrant networks play a less important role than admission procedures. It is notable to observe that in terms of immigration policies, the possibility of permanent settlement and acquisition of citizenships rank the lowest. Especially for students who choose Europe as a destination area, the possibility of settlement is particularly not important. The students are much more interested in clear application procedures and the chance that immigration policies will allow them to re-enter the country later on in the career.

We have so far demonstrated that there are characteristic differences between people with respect to location choice, as well as at point different ratings of factors relevant for potential host country. To identify which of these factors increase the likelihood that respondents express plans to go to a specific location, we will use a multinomial logit regression analysis in the next section.

7. THE MULTINOMIAL LOGIT REGRESSION

We use a multinomial logit specification to model the choice between three prospective destinations: a) The United States, b) The Anglo-Saxon countries (The United Kingdom, Canada, Australia and New Zealand) and c) continental European countries. Multinomial logit models are used to model relationships between a polytomous response variable and a set of regressor variables (Kuhfeld & So, 2007). This specification allows us to test whether the factors associated with preferring one destination are statistically different from the factors associated with preferring another destination. The Multinomial Logit Model (MNLM) is based on the principle that individuals choose the outcomes which maximise the utility derived from their choice. A rational person would choose an alternative that maximizes the utility derived from the choice. An individual i (i = 1, …, N) faces m possible choices, with Y_{ij}* denoting the level of indirect utility associated with the jth choice, called the latent variable. The observed variables Y_{ij} are defined as:

$Y_{ij} = 1$ if $Y_{ij}^* = \text{Max}\ (Y_1^*, Y_2^*, \dots, Y_m^*)$

$Y_{ij} = 0$ otherwise

If $Y_{ij}^* = V_j\ (X_j) + \varepsilon_j$ where X_j is the vector of attributes for the jth choice and ε_j is the random error associated with that choice, the specific form of the model is determined by the assumed distribution of ε and the specification of how $V_j(X_j)$ is related to the measured variables (Constant & D'Agosto, 2008).

We study the migration intentions of Indian students prior to their move. The dependent variable is a categorical variable of three unordered outcomes. In estimating the model, the continental European countries are chosen as the reference outcome to which we compare the remaining two alternative destinations.[3] The explanatory variables should explain the impact of demographic factors, university background as well as the value placed on economic, socio-political and institutional factors on country choices. On the basis of the earlier empirical studies as well as based on the observations form the descriptive statistics, we select a group of variables which could explain the country choice of individual students. Table 7 (in the Appendix) reports the

[3] A small number of students who expressed the intention of going to countries other than those belonging to the three studied groups are omitted from the analysis.

results of the multinomial logit model with the reference category of having intentions to move to continental European countries. We focus on the results which are statistically significant.

The results show that people in relationships are less likely to choose the United States (as opposed to European countries) than single people. In fact, the marginal effects show that they are 39 percent less likely to plan the move to the United States than single people, compared to the option of going to European countries. Also the field of studies turns out to be a significant determinant for location choice. Those who study engineering are more likely to go to the United States compared to students in natural sciences. The results clearly show that country choice can be well explained by the level of educational programme. Compared to students enrolled in Bachelor programmes, both, Master students as well as PhD student and Post-Doctoral researchers are more likely to plan the move to the United States. This result is in particular strong for PhD students and Post-Doctoral researchers, who are 72 per cent more likely to go to United States than to Europe.

Considering that descriptive statistics show no statistically significant differences for choosing a certain country in terms of students' family background, we decided not to include these variables in the model. We further show that parents' support is more important for going to Europe. For both alternative destinations, students perceive their parents' attitude towards their move abroad as less encouraging than students planning to go to Europe. In addition to having parents' support, the networks of people living abroad can also explain country preferences. As migration network theory focuses on the prediction of new migration flows based on the settlement of migrants in specific places of destination (Stark & Wang, 2002), we find that having friends who live abroad plays a significant role for choosing the continental European countries versus the United States. In the same way as for the decision to move abroad or not, our results show that so called "weak ties" in contacts with friends and colleagues matter more than "strong ties" also in terms of country choice exercise, congruent with Granovetter's hypothesis on the "strength of weak ties" (Granovetter, 1973). While including family networks as well as non-kinship networks in the model, only having friends living abroad is a significant determinant for choosing European countries over the United States. Migration to the United States and to other Anglo-Saxon countries appears not to require first-hand information from personal contacts as there is abundant information available from previous migration emerging into a migration system (discussed further below) (Mabogunje, 1970). Information about migrants' success and reception in receiving countries is conveyed back to the origin through news as well as through other widely available feedback mechanisms, which reduces unobserved conditions in receiving countries (Radu, 2008). In this case existing migrant network is not required, as most migrants will move where the others have gone earlier, leading to self-reinforced migration behaviour (Epstein, 2008). For new destinations, however, networks are important for sharing information and increasing awareness and aspirations for considering that specific place. Therefore, students who would pick any of the European countries use their friends abroad as "bridgeheads" (Böcker, 1994) by depending on their bridging capital to provide information on existing options. It is the access to information which makes migration to new destinations more likely for groups with strong bridging capital (De Haas, 2010). Still, minor Indian communities in continental European countries play against choosing any of them as a potential destination for those students who rank the closeness of Indian community at a high value. Students with preference to live close to the existing Indian community exhibit a clear, statistically significant, preference for the United States. A Master student in physics from JNU speaks in favour of choosing the United States for the reason of being able to benefit from the safety network of their relatives:

> "A lot of Indians settle in the US. So my relatives are also there. So if there's a good university in a place where my relatives are, then probably I would prefer going to that place because at least I know somebody there. There would be a moral support and you know, once in a while you have a change, where you go to your place and your people. That would actually give you... That will give you a moral support."

Considering the high concentration of highly-skilled Indians in the United States (66.4 per cent of all highly-educated Indians living abroad (OECD.stat)), it is evident that current Indian migrants follow in the footsteps of the recent wave of skilled migration starting from the 1970s onwards. The four decades long history of ever increasing waves of highly-skilled migration between India and the United States resulted in "geographical structuring and clustering of migration flows" (Bakewell, de Haas, & Kubal, 2011, p. 5), making the United States close to synonymous with the decision of going abroad.

From the question on importance of factors for respondents' consideration on the location choice we included those factors which were found to be relatively more important by the respondents and where we found larger differences between students preferring different destinations. Looking at other subjective ratings of importance in our results, the country choice decision is influenced by importance placed on the quality of educational institutions. Students who consider high-level educational institutions very important for the place where they would like to locate themselves are less likely to pick the Anglo-Saxon countries. This is consistent with the finding that migration to other Anglo-Saxon countries is more likely to be motivated by work-related reasons. In comparison, it is evident that students choosing the continental European countries value educational factors very highly, indicating that continental Europe is primarily a destination for studying and to a lower extent thought of as a location for a longer stretch of time.

The local characteristics, also referred to as amenities, affect the quality of life because people have preferences for certain types of areas, for example areas that offer more security, better access to facilities, more moderate climate, and the like. Mori (Price et al., 2003) recognizes location and social facilities in a city as an important environmental condition that influences students' choice. However, our results show that the importance placed on amenities of local environment does not vary significantly between Indian students choosing different locations. The feeling of safety, importance of living in a family-friendly environment and being in a different language environment do not determine preferences for locations.

In order to observe the effect of immigration policies in migration decisions, we include the respondents' rating of how important application procedures are for their prospective host country. Our results show that such rating is a significant determinant for the choice of going to the United States as opposed to migrating to continental European countries. The marginal effects show that students who place the importance of clear application procedures for residence and work permits at a high value are 14 per cent more likely to choose the United States. Again, this shows the motivation to continental European countries to be limited for the purpose of higher education, reducing the relevance students place on admission procedures. Considering that admission procedures are less demanding for international students, those respondents who are exclusively interested in going abroad for studying are found to place less importance on immigration procedures, as has been often explicitly mentioned in several in-depth interviews. The commonly mentioned perception regarding immigration procedures is that the US is far more lenient than European countries when it comes to immigration option. Aseem, from BHU-IT, gives one such opinion:

> "Some of the European countries, like France and Germany, they're quite harsh because of their leaders there; they're having some problem there, so what they think, if Indians or any other people get into the country, then they will eventually cause less opportunities for the people of their country…"

Moreover, students' mobility plans to go to the United States apparently already involve incentives to stay abroad also after the completion of studies, when obtaining a residence and work permit becomes a necessary step to take into consideration.

8. CONCLUSION

The main objective of this paper is to observe if the determinants of migration to continental Europe different from determinants of migration to the Anglo-Saxon countries (UK, Canada and Australia) or to the United States. Despite the increasingly common alarms that the United States is losing its triumphant position of attracting the best and the brightest from all over the world (Wadhwa, 2012), our results show quite the contrary. In our sample of Indian science and engineering students, a remarkable 52.7 per cent choose the United States as their first option for moving abroad. The second most often mentioned country, Germany, is lagging far behind at 13 per cent of the answers. Nevertheless, it is of relevance for assessing the attraction of European countries to find Germany stated more often than the United Kingdom, Canada or Australia and also, to find Switzerland, The Netherlands and France being mentioned by more respondents as their first choice.

We find that students choosing European countries differ in several aspects from those choosing the United States. As in earlier studies (Constant & D'Agosto, 2008; De Grip et al., 2009), specialization of Indians in certain field of studies is a strong predictor of country preference. Indian students in engineering have stronger tendency to move to the United States, while continental European countries have higher attraction for students in natural sciences. Students in advanced research programmes are especially interested in moving to the United States. The results also show that students who plan to go to Europe more often have friends or colleagues living abroad, have better command of English and are from urban areas, which leads us to conclude that moving to Europe requires more resources and skills. Migration to new destinations often entails higher costs and risks (De Haas, 2010, p. 12), which can be overcome by existing networks, higher income levels and better language skills. These enable potential movers to overcome the lack of information about new destinations and persevere on moving to less common destinations. Four decades of highly-skilled migration from India to the United States emerged into a migration system, where:

> "formal and informal subsystems operate to perpetuate and reinforce the systematic nature of international flows by encouraging migration along certain pathways, and discouraging it along others" (Mabogunje, 1970, p. 12).

The movements of large flows of skilled Indians to the United States is linked also with large flows of good, capital, ideas, and information (Fawcett, 1989), which leads to "an identifiable geographical structure that persists across space and time" (Mabogunje, 1970, p. 12). Most migrants follow informational cascade and herd behaviour trusting the decisions of preceding migrants, which leads to difficulties in new destinations, such as continental European countries, to attract foreign talent. There is a growing agreement that skilled migration is desirable for Europe (Kahanec & Zimmermann, 2011), which lead to adjustments of migration policies as well as internationalization of education programmes in order to attract foreign students as an important source of highly-skilled migrants (Boeri, Brücker, Docquier, & Rapaport, 2012). Our finding show that European countries are relatively attractive destinations for Indian students for study purposes but have a problem in retaining foreign students after their studies. They are obviously not perceived as a place with good career opportunities for a probable long-term stay. Few students planning to go to continental Europe plan to stay longer than five years, the possibility of settlement or obtaining a citizenship is rated as unimportant for their move abroad and their decision to pick Europe can be explained by rating quality of educational institutions with high importance. All these findings point to the problem that continental European countries face for retaining foreign students. Soutar and Turner (2002), Binsard and Ekwulugo (2003) are among the papers which have through empirical studies proven the relevance of job prospects in the decision making process of students. Finding in our dataset that students who chose the United States or the other Anglo-Saxon countries place the highest value on quality and content of their work, while for continental European countries this factor was on average rated only as the eleventh most important, shows again that European countries have to change the perception of and the actual career possibilities in order to be regarded as attractive career destinations.

We find that information available to students about potential destinations is limited, making the decision dependent on the available information and existing perceptions about which options are best for them. The decision is based on a limited number of better known choices, picking their preferred destination out of a few options. Adjustment of migration policies in Europe which enables students to stay in destination countries after completion of their studies has not apparently activated the desired response to make given locations more attractive for work migration. The competition for the best and the brightest of the world is tough and is a relevant policy concern of many governments. Europe may continue to be the "land of missed opportunity, unable to attract the talent" (Boeri et al., 2012, p. 1). Our results as well as other empirical studies (Binsardi & Ekwulugo, 2003; Boeri et al., 2012; Constant & D'Agosto, 2008; De Grip et al., 2009; Soutar & Turner, 2002) show that career prospects matter most to attract the highly-skilled, which provides clear policy implications. Improving the access to the labour market for foreign workers and transition from studying to the local labour market would cover the missing link in placing continental Europe more visibly on the map of global race for talent.

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APPENDIX

Table 1: Distribution of Indian-born migrants in major OECD destination countries by educational levels

Country of destination	ISCED 0/1/2	ISCED 3/4	ISCED 5/6	All levels of education
United States	12.8%	18.1%	69.1%	958,057
Canada	32.0%	27.3%	40.7%	306,860
Australia	18.8%	27.9%	53.3%	79,731
United Kingdom	51.3%	15.4%	33.3%	398,753
Other OECD European	49.7%	28.8%	21.5%	114,397
Other OECD[4]	14.2%	36.8%	49.0%	20,828
OECD - Total	497,917 (26.5%)	381,411 (20.3%)	996,813 (53.1%)	1,876,141 (100%)

Notes: Levels of International Standard Classification of Education: ISCED 0: pre-primary education, ISCED 1: primary education, ISCED 2: lower secondary education, ISCED 3: upper secondary education, ISCED 4: post-secondary non-tertiary level of education, ISCED 5: tertiary type education, ISCED 6: advanced research qualification. Source: DIOC, OECD.stat, extracted on September 26, 2010

Table 2: Immigration flows to the selected EU member states from India as country of previous residence, from 1998 to 2009[5] (absolute numbers)

Destination country/ Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Denmark	383	449	476	467	410	589	653	766	866	1,494	1,130	883
Germany	4,964	5,279	6,718	:	9,413	:	9,030	8,303	9,375	9,855	11,378	:
Ireland	:	:	:	:	:	:	:	:	:	:	2,039	1,372
Spain	259	340	686	859	905	1,313	2,396	3,614	3,629	4,891	5,290	4,513
Italy	:	:	4,759	:	5,150	8,581	9,197	7,279	6,429	7,209	12,637	12,952
Netherlands	1,013	858	762	796	697	655	631	1,214	2,046	2,502	3,405	2,697

[4] Other OECD countries are New Zealand, Japan, Turkey and Mexico.

[5] Eurostat does not provide data for France for these categories. In certain countries, data are not available for all reporting years, which is marked in the table as a colon (:).

Austria	763	951	:	948	1,361	1,332	1,173	1,296	727	924	971	:
Sweden	377	375	447	587	567	881	881	1,039	1,029	1,128	1,679	1,832
United Kingdom	:	:	:	15,957	20,369	29,802	46,219	45,836	51,849	:	:	:

Source: Eurostat

Table 3: Basic characteristics of the surveyed population

	Values	**Percentages**
Personal characteristics		
Gender N=327	female male	29.05 70.95
Age N=318	22 or younger Between 23 and 26 27 and older	39.62 35.22 25.16
Community N=302	Non-Hindu communities Hindus	20.20 79.80
Reserved group N= 310	reserved group non-reserved group	16.45 83.55
Relationship N=320	single relationship (boyfriend/girlfriend) married	76.88 13.13 10.00
Children N=321	no children children	75.39 24.61
University characteristics		
University N=350	JNU IISc Bangalore IIT Delhi BHU-IT Jammu	41.43 21.14 12.86 12.00 12.57
Field of studies N=314	natural sciences engineering	34.71 65.29
Detailed fields of studies N=314	computer and systems sciences information technology physics math life sciences bio technology environmental sciences engineering food science chemistry	13.69 7.32 6.05 5.41 20.38 9.87 5.73 20.70 7.96 2.87
Level of studies N=305	Bachelor programmes Masters programmes PhD and Post-Doc	26.89 35.08 38.03

Average grade N=293	Second (B+, B, B-)and third class (below C+) First class (A+, A, A-)	26.96 73.04
Proficiency in English N=317	Medium or lower (3-5) Very good or good (1-2)	24.61 75.39
Family background		
Mother's highest education level N=315	none, or some primary completed primary secondary vocational university	6.98 5.71 28.89 5.71 52.70
Father's education N=316	none, or some primary completed primary secondary vocational university	2.22 2.85 13.29 7.59 74.05
Support of family to move abroad N=317	Encourages move Prefers stay Doesn't care/Neutral	58.68 35.33 5.99
Average monthly income of the household N=314	Less thenRs. 25000/- per month Between Rs. 25001/- and 30,000/- per month Between Rs. 30,001/- and 40,000/- per month More than Rs. 40,000/- per month	40.45 18.79 16.24 24.52
Area of parents' residence N=319	Urban metropolitan area Semi-urban, smaller cities and towns Rural area	32.29 52.04 15.67
Lived abroad N=371	not lived abroad lived abroad	86.25 13.75
Parents lived abroad N=289	not lived abroad lived abroad	91.70 8.30
Brother or sisters lived abroad N=289	not lived abroad lived abroad	82.35 17.65
Extended family abroad N=293	not lived abroad lived abroad	57.34 42.66
Friends abroad N=289	not lived abroad lived abroad	48.79 51.21
Colleagues abroad N=285	not lived abroad lived abroad	59.30 40.70

Table 4: Comparison of the S&E students by main characteristics according to preferred country (in percentages)

		USA	Anglo-Saxon countries	European countries	Total
Total N=246		138 56.10	52 21.14	56 22.76	246 100%
Personal characteristics					
Gender N=193 Pr = 0.579	Male Female	72.55 27.45	73.33 26.67	80.43 19.57	74.61 25.39
Age N=184 Pr = 0.409	22 and younger Between 23 and 26 27 and older	26.80 35.05 38.14	36.59 39.02 24.39	21.74 43.48 34.78	27.72 38.04 34.24
Community N=173 Pr = 0.149	Non-Hindu Hindu	20.65* 79.35*	35.90 64.10	30.95 69.05	26.59 73.41
Reserved status N=183 Pr = 0.367	Reserved Non-reserved	16.33 83.67	11.90 88.10	23.26 76.74	16.94 83.06
Relationship N=186 Pr = 0.483	Single Married/in a relationship	79.00 21.00	69.77 30.23	74.42 25.58	75.81 24.19
Children*** N=186 Pr = 0.007	No children Children	72.73 27.27	93.02*** 6.98***	65.91* 34.09*	75.81 24.19
University characteristics					
Type of university N=210 Pr=0.833	Research-oriented Practical/applied	84.07 15.93	87.50 12.50	83.67 16.33	84.76 15.24
Study field N=188 Pr=0.322	Natural sciences Engineering	36.73 63.27	35.56 64.44	48.89 51.11	39.36 60.64
Level of studies** N=181 Pr=0.021	Bachelor Masters PhD and Post Doc	18.95 29.47 51.58	14.29 50.00*** 35.71*	29.55* 18.18*** 52.27	20.44 31.49 48.07
Average grade N=171 Pr=0.539	Lower than first class (below B+) First class (A+, A, A-)	25.84 74.16	17.07 82.93	24.39 75.61	23.39 76.61
Proficiency in English N=183 Pr = 0.209	Medium, Bad, Very bad Very good and Good	20.83 79.17	20.93 79.07	9.09* 90.91*	18.03 81.97
Family background					

Mother's highest education N=183 Pr = 0.533	less than university education university education	47.92 52.08	58.14 41.86	50.00 50.00	50.82 49.18
Father's highest education N=184 Pr = 0.760	less than university education university education	25.77 74.23	30.95 69.05	24.44 75.56	26.63 73.37
Support of family to move abroad N=183 Pr = 0.612	encourages move doesn't care/neutral prefers stay	63.92 7.22 28.87	75.61 2.44 21.95	66.67 8.89 24.44	67.21 6.56 26.23
Average monthly income of the household N=181 Pr = 0.539	Less than Rs. 25000/- Between Rs. 25001/- and 30,000/- Between Rs. 30,001/- and 40,000/- More than Rs. 40,000/-	45.36 15.46 13.40 25.77	31.71 29.27* 14.63 24.39	41.86 16.28 18.60 23.86	41.44 18.78 14.92 24.86
Area of residence N=185 Pr = 0.257	Urban metropolitan area Semi-urban, smaller cities and towns Rural area	27.27 56.57 16.16	23.81 54.76 21.43	43.18** 40.91* 15.91	30.27 52.43 17.30
Migration history					
N=221 Pr = 0.213	Respondent not lived abroad lived abroad	86.99 13.01	86.96 13.04	76.92* 23.08*	84.62 15.38
Network abroad					
Parents N=167 Pr = 0.403	Parents not lived abroad lived abroad	93.26 6.74	86.11 13.89	92.86 7.14	91.62 8.38
Sibling* N=167 Pr = 0.078	Siblings not lived abroad lived abroad	82.95 17.05	73.68* 26.32*	92.68* 7.32*	83.23 16.77
Extended family N=167 Pr = 0.950	Extended family not lived abroad lived abroad	57.95 42.05	55.26 44.74	58.54 41.46	57.49 42.51
Friends N= 169 Pr = 0.142	Friends not lived abroad lived abroad	45.56 54.44	43.59 56.41	27.50** 72.50**	40.83 59.17
Colleagues*** N= 165 Pr = 0.002	Colleagues not lived abroad lived abroad	54.02* 45.98*	59.46 40.54	24.39*** 75.61***	47.88 52.12

Note: Pearson's Chi-square test; Significance levels * p < 0.1, **p < 0.05, *** p < 0.01

Table 5: Comparison of mean values for factors by country and region alternatives

	USA	Anglo-Saxon countries	European countries	Total
1) high demand for my qualifications	4.432	4.372	4.222	4.366
2) easily finding a suitable job after my studies	4.168	4.093	4.089	4.131
3) attractive salary	4.365	4.214	4.067	4.257

4) quality and content of my work	4.75[1]	4.581[1]	4.289	4.598[1]
5) good research facilities in companies and public institutions	4.691[2]	4.442[3]	4.511[2]	4.589[2]
6) no more than 8-hour working days	3.674	3.571	3.356	3.571
7) career progression opportunities	4.521[5]	4.286	4.4[3]	4.437[5]
8) recognition of educational/professional qualifications	4.684[3]	4.317	4.364[5]	4.522[4]
9) job security (not easy for employers to fire workers)	4	4.000	3.909	3.978
10) costs of living	4.084	3.929	3.954	4.017
11) family-friendly environment	4.032	4.419[4]	3.977	4.11
12) good quality of higher education institutions	4.629[4]	4.372	4.533[1]	4.546[3]
13) multicultural environment	4.011	3.927	3.909	3.967
14) rich cultural institutions (museum, theatre, cinema...)	3.6	3.791	3.791	3.691
15) public safety	4.263	4.581[1]	4.256	4.337
16) political stability, stable government	4.326	4.381[5]	4.318	4.337
17) economic stability	4.326	4.381	4.318	4.337
18) social equality among population	4.372	4.070	4.349	4.294
19) friendly, hospitable population	4.302	4.209	4.341	4.29
20) not feeling discriminated	4.427	4.209	4.295	4.344
21) English commonly spoken	4.206	4.163	4.023	4.152
22) no need to learn a new language	3.646	3.535	3.204	3.514
23) having high social status	3.842	3.659	3.651	3.754
24) attractive taxation system	3.687	3.651	3.386	3.607
25) quality and access to medical services (hospitals, family doctor)	4.474	4.302	4.378[4]	4.411
26) social security and benefits (such as unemployment benefits, pensions)	4.117	3.884	4.182	4.077

Note: The numbers in the upper case show ranking of the five most important factors within a certain destination region.

Table 6: Comparison of mean values for factors relevant for immigration policy by country and region alternatives

	USA	Anglo-Saxon	European countries	Total
Living near a large Indian community	3.65[5]	3.381[6]	3.070[6]	3.454[5]
Easily bringing in my family now or later	3.814[3]	3.571[4]	3.302[4]	3.642[4]
I can easily return to later in my career	4.21[2]	3.900[1]	3.977[2]	4.086[2]
Clear application procedure for residence and work permit	4.24[1]	3.875[2]	4.114[1]	4.13[1]
Accessibility of your spouse to the labour market	3.586[6]	3.385[5]	3.186[5]	3.448[6]
Being able to stay in a country longer than 5 years	3.72[4]	3.775[3]	3.429[3]	3.665[3]
Possibility of permanent settlement	3.243[8]	3.073[8]	2.837[8]	3.112[8]
Possibility of acquiring local citizenship	3.301[7]	3.100[7]	3.093[7]	3.21[7]

Note: The numbers given as the upper case designate the ranking of the most important factors within a certain destination region.

Table 7: Country choice coefficient estimation results

Independent variables	Probability for choosing the US		Probability for choosing the other Anglo-Saxon countries	
	Coefficient	St. Error	Coefficient	St. Error
(reference: education-motivated move) Work-related move	0.848	0.647	1.827**	0.871
Other reasons to move	-1.052	1.785	-1.443	2.890
Female	0.979	1.245	1.259	1.461
(reference: from a Hindu community) from a non-Hindu community	-0.003	1.151	0.581	1.518
(reference: single as a reference) in a relationship/married	-1.817**	0.861	-0.233	1.143
has children	-0.618	0.662	-1.021	1.172
(reference: research-oriented universities) Practical/applied universities	2.999	2.506	-0.687	3.027
(reference: studies engineering) studies natural sciences	-1.863**	0.837	0.010	1.163
(reference: enrolled in Bachelors programme) enrolled in Masters programme	3.700*	1.974	2.152	2.031
doing a PhD or Post-Doc	4.550**	2.120	1.212	2.242
(reference: parents prefer stay) parents encourage move	-1.769**	0.840	-0.770	1.258
parents neutral to move	-1.532	1.328	-17.513***	3.957
(reference: below average household income) above average household income	-0.060	1.053	0.127	1.498
(reference: from an urban area)	-0.541	0.625	0.770	1.351

from a semi-urban area				
from a rural area	1.212	1.133	2.074	1.939
(reference: respondent never lived outside India)				
lived outside India in the past	1.609	1.026	-0.173	1.109
parents have lived abroad	-1.691	2.154	2.032	2.175
siblings have lived abroad	2.596	1.894	1.614	2.202
friends lived abroad	-1.239*	0.694	-0.603	0.921
colleagues lived abroad	-1.074	0.896	-1.089	1.243
importance of quality and content of work	0.665	0.688	-0.252	0.586
importance of good quality of education institutions	-0.108	0.810	-1.906*	1.128
importance of family-friendly environment	0.752	0.488	0.801	0.530
importance of public safety	-0.765	0.561	0.822	0.895
importance of not having to learn a new language	0.314	0.313	0.115	0.323
importance of being close to an Indian community	0.679**	0.320	0.226	0.482
Importance of application procedures	0.714*	0.399	-0.109	0.560
Log likelihood	-65.407		-65.407	
Pseudo R^2	0.4214		0.4214	
Number of observations	112		112	

Note: Comparison outcome is the probability to migrate to continental European countries. Notes: Significance levels * p < 0.1, **p < 0.05, *** p < 0.01; robust standard errors in the second column.

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